

Dear Friend of REWIND:

You have now received two copies of the April, 1967 General Film REWIND. A few days ago you received a copy with Page 2 printed on Page 4, and Page 4 printed on Page 2.

While we must admit this was an innovation, and quite in tune with todays urge to do things in ways they haven't been done before, we thought the transposition might be a bit confusing. So here is your second April REWIND, with the pages printed as intended by the editor (we hope!)

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(A Division of DeLuxe Laboratories, Inc.)

REWIND

General Film

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Standards? . . . like what's the difference man . . . we been using 46½mm film all along . . .

THIS MONTH'S FEATURE: THE IMPORTANCE OF BEING STANDARD

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So, What's it to you . . .

THE IMPORTANCE OF BEING STANDARD

The word "standardization" may seem the label on a rather dull subject. In business quarters, it may possibly arouse some sense of resentment, with the thought that "nobody's going to tell *me* what to do!"

Actually, standardization is essential in our modern industrial and technological society. In earlier societies, equipped with hand-made tools, furniture and equipment, each carpenter or artisan could design and build to suit his own (and his customer's) ideas with no concern about how others were doing. But, today, this is no longer practical.

When we buy a garden hose we expect the threading in the coupling will exactly fit the threading on the faucet to which we will attach the hose. When we buy a new tire for the family car, we expect it will fit on the wheel. When we put a reel of 16mm film on a 16mm projector, we expect the holes in the film to exactly correspond to the various sprockets along the film path.

However, the threads of the hose coupling and the faucet, the proper fitting of the auto tire, the corresponding of the film sprocket holes and sprocket teeth were not the result of a fortunate accident. They resulted from confusion, conversation, agreement, and compliance.

Through the years, as a new invention or product reached the market, and competitive products were introduced, a confusion of sizes or specifications or types faced the customer. Out of this confusion—and the resulting frustration and complaints of customers—it became apparent to the manufacturers that the growth of their market would be hampered by the lack of standards. So, they started to discuss the problem and the possibilities, and out of this conversation came agreements that all the manufacturers involved would manufacture certain basic elements to the same specifications. When this agreement was strengthened by general voluntary compliance, sales expanded and the market was better for everyone—seller and buyer both.

Our own film industry went through this process, and the entire communications industry continues to meet this same problem as new inventions and technical advances lead to the introduction of new products and processes. The problem exists if there is the desirability or necessity of interchangeability.

In the early years of our business there were several dozen different sizes and types of motion picture film stocks. Each manufacturer had his own ideas about the shape and size of sprocket holes, the spacing of sprocket holes and width of the film. Some of these differences, it is true, resulted from the attempt to circumvent the other fellow's patents.

It was a welter of confusion until about 1907, when the 35mm film width was adopted, with specifications as to the size and position of the sprocket holes. By acceptance, this became a standard. All film was manufactured to this standard and all equipment was designed to use it.

This provided the basis for world-wide distribution of motion pictures. The producer and distributor of a 35mm feature gained a greatly expanded potential market. The release prints which could be run through a projector in the U.S. would also run through 35mm projectors in every other country subscribing to the standard.

Later, in 1923, when the 16mm width was accepted as a standard, the base was established again for world-wide distribution.

Now, with 8mm rapidly moving from the widespread discussion stage to broad professional distribution, we are again presented with a variety of formats, sound tracks, sprocket-hole sizes, and sound advances. And each manufacturer who brings out a new cartridge-load projector also develops his own design of cartridge.

However, with confusion apparent, the discussions are underway which will result eventually in the establishing of certain standards. We should be able to anticipate early agreement on which of the three different existing formats will be accepted as the standard—Super 8, regular eight, or Maurer 8, along with agreement on how many frames the optical or magnetic sound track will precede the first frame of picture—so that the 8mm print with a standard track advance can be utilized in any corresponding 8mm projector, or projector cartridge. These two agreements are essential to the growth of 8mm release, even though the film cartridges themselves may not be standardized.

The problems which can result from a lack of international standards are apparent today in color television broadcasting. Three different transmission systems exist, each with valid arguments for its own acceptance, but with lack of compatibility between any one system and color TV receivers built for the other two systems.

Thus, the three color TV systems, which will soon be an international fact, are going to create programming problems.

Since this situation presents a classic example of the type of technical problem which eventually requires an agreement on standards, let's go into it in some detail.

The American system, in use in Japan, Canada and the U.S., was developed about 1950. Its success is apparent wherever you go in any of the three countries. Known as N.T.S.C. for National Television Standards Committee, it was developed so that existing black and white receivers could get color transmissions on monochrome. On the other hand, when transmissions were in black and white, N.T.S.C. color sets could receive them.

At the Oslo International Radio Consultative Committee meeting in 1966, several of the European countries felt that the N.T.S.C. system made receivers too complicated for viewers to adjust.

The West Germans and the British agreed on what they term the PAL system (condensed from phase alternation line). Other Western European countries are inclined to install this system, too.

The French and the Russian engineers claimed an even better system, called SECAM (from "Sequential with Memory").

Basically, the three systems use similar color TV cameras and color tubes.

The problem is what happens between the color camera and the television receiver color tube.

European engineers claim that signals transmitted by our N.T.S.C. system are easily distorted by going out of phase when transmitted over long distances via co-axial cable or very high frequency radio links—resulting in an undesirable mix of the three transmitted colors.

The N.T.S.C. receiver is the least complicated electronically but it depends on the transmitted signal to keep the color in lock-step. This puts the burden on the transmitter, which must have extra electronic circuits to keep the color phasing in tune. American networks say that this problem is practically licked. And, American receivers are less expensive, less complex to construct than their European counterparts, and high volume has lessened the overall cost.

The PAL system replaces the N.T.S.C. synchronizing signal with a cleverly designed but complex electronic color control system. The system is more complicated in both transmitting and receiving, and adds to the receiver cost. However, the color errors which sometimes occur on the N.T.S.C. system, are cancelled out by PAL.

The SECAM system is even more complicated, as is the SECAM receiver, which has a delay built in so that it reads the line identification signal and receives only that color at that instant in time. In a sense, it synchronizes itself.

So, what?

If European countries want their own systems of color TV why should we care? Because three different systems introduce technical problems which hamper programming distribution.

Take video tape. When it is sent abroad for distribution for distribution and transmitted via either SECAM or the PAL system, it goes through an expensive and complicated piece of equipment called a transcoder. It decodes the tape so it can play on a TV system for which it wasn't made. The resulting image is degraded—maybe far beyond what would be satisfactory—which could reduce saleability of the product.

Since motion pictures have long established standards, the problem of compatibility doesn't arise with color film. Color film will play on all three systems. A truly universal medium, all color motion pictures are transmitted via telecine chains that are compatible. But another problem does come up in geographical border areas. Viewers in these areas in different countries will be prevented from seeing one system of TV or the other, unless manufacturers produce a receiver that will get both systems. Estimates run higher than 150% of the original cost of a receiver made for one system to receive both. With the

higher cost of both SECAM and PAL receivers, since these are more complex electronically than N.T.S.C. sets, who will be in the market for a TV set that will get both European systems? Hence there are limitations on broad overseas distribution and overall commercial potential.

The problem is apparent, as is the answer—an agreement on a standardized world-wide system of color TV.

Engineers agree that technically there is little to choose from when comparing color picture quality in any of the three systems. If anything, N.T.S.C. has a slight edge over SECAM in horizontal resolution and alteration of the vertical edges. On the other hand, the PAL system and the SECAM system permit video tape recording more easily.

The work of standardization, after a problem is apparent, is in the hands of the engineers and technical experts within the industry faced with the problem.

In the motion picture industry, the Society of Motion Picture and Television Engineers has accepted this responsibility since its founding in 1916 as the S.M.P.E. Nearly 300 standards have been worked out, and then approved by the American Standards Association to become ASA Standards. (ASA founded in 1918, last year changed its name to United States of America Standards Institute.)

To achieve international acceptance, a standard adopted by any one country or group of nations must be presented to and accepted by the International Organization for Standardization, in which 45 nations are represented.

The task of working out an agreement which will result in a standard is formidable, demanding time, effort, and patience. Achieving an agreement within a nation is a slow process, and even more complicated in the international area.

slow process, and even more complicated in the interna-

But, the desirability of achieving these standards makes the result inevitable—and the work goes on.

CONGRATULATIONS

Our congratulations to Paul Schwegler, member of General Film Laboratories' sales staff and former All-American football great from the university of Washington. He has been elected to the Football Hall of Fame.

Paul was one of seven former college football stars presented to the Honors Court of the National Football Foundation and Hall of Fame for consideration and will be one of less than 200 who have received the honor in the past 15 years.

BIG SMPTE CONFERENCE ATTENDANCE

The 101st Technical Conference of the Society of Motion Picture & Television Engineers was most successful as measured by attendance, the papers program, and the auxiliary events.

The Conference, which was held in the New York Hilton the week of April 17th, had a registration of approximately 1600 people, with an additional 2000 going through the equipment exhibit. Attendance was excellent at various single and concurrent papers sessions, which covered a broad range of film interests. The Get-Together Luncheon attendance was probably the largest ever, and the speaker, Jack Valenti, President of the Motion Picture Association, pointed out the need for the film industry to attract more engineers, and urged the re-establishment of the Motion Picture Research Council.

SMPTE President G. Carleton Hunt, who is also President of DeLuxe Laboratories, Inc., praised the excellent work of the people responsible for the successful conference, including Conference Vice President Mike McGreal, Producer Service; Program Chairman Blair Benson, CBS; Arrangements Chairman John Kowalak, Movielab; and Exhibit Chairman Dominick Capano, SOS Photo Cine Optics.

The 102nd SMPTE Technical Conference will be held the week of September 17th in Chicago at the Edgewater Beach Hotel.

"ARE YOU LOOKING?"

Responses to the listings below should be sent to REWIND, General Film Laboratories, 1546 N. Argyle Avenue, Hollywood, California, 90028, in care of the code number indicated. They will be forwarded, unopened, to the proper organization or individual.

Film Editor/Sound Recordist/Mixer—Desires to relocate. Over 20 years varied experience, all phases 16mm and 35mm film production. Preference California or Florida, however other areas considered. Complete resume on request. Code 422.

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Young woman, M.A. Cinematography UCLA, wishes production work. Prefer L.A. unless temporary travel or location. Extensive background in theater, plus still photography. Code 423.

* * * * *

Director (Editor) Cameraman, Negative Cutter—Familiar with all phases of production. Seven years experience in 16mm. Looking for creative opportunities. Code 424.

* * * * *

Writer—Wanted for permanent position with expanding production department, working in unique combined visual technique medium (motion, animation, still) producing teaching and training programs. Must be experienced in script and/or storyboard preparations. Responsibilities would include participation in preparation of supplementary printed materials. Send resume and general salary requirements. Code 425.

SIX PROMOTIONS ANNOUNCED AT GENERAL FILM LABORATORIES

G. Carleton Hunt, President of DeLuxe Laboratories, Inc., in March announced that six members of DeLuxe's General Film Laboratories division in Hollywood were promoted to new posts.

Ray Gaul, formerly Production Manager, has been named Plant Superintendent and Ned Johnston, formerly Assistant Production Manager, was appointed Assistant Plant Superintendent.

Ellis Mills, formerly Customer Service Manager, has been appointed Production Assistant. His primary duty will be the organization and scheduling of 35mm television production under Mr. Gauk's direction.

Ken Trefsgger, who previously handled 16mm television work, replaces Mills as Customer Service Manager.

Ron Jarvis has taken over the duties previously handled by Trefsgger.

Ted Hageman, formerly Printing Department Supervisor moved into the newly-formed post of Production Assistant. His responsibilities will include all printing operations, positive developing, or other daytime developing operations.

Mr. Hunt said the appointments, which were all effective March 27, are part of the overall multi-million dollar expansion program underway for the past year at all DeLuxe plants throughout the country.

DeLuxe has plants in New York and Chicago in addition to the two plants in Hollywood—DeLuxe Laboratories, Inc. at 1418 North Western Avenue and General Film Laboratories at 1546 North Argyle Avenue.

AV DATE BOOK

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| May 15-19 | SPSE Annual Conference on Photographic Science and Engineering, Sherman House, Chicago. |
| May 18-20 | Final selection of 1966 Golden Eagle winners for International Competition by the Council of International Non-theatrical Events (CINE), Washington, D.C. |
| June 3-4 | 6th Annual Independent Film-Makers Festival, Foothill College, Los Altos Hills, California. |
| June 4 - | 19th Annual EMMY Award Presentations, Century Plaza Hotel, Los Angeles, California. |